

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

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Pool Thurmont Formation Queens County LeaInitial 7 Annual 7 Special 7 Date of Test 7-14-56Company D. B. Monahan, Jr. Lease 10000 State TX Well No. 2Unit 7 Sec. 17 Twp. 6S Rge. 37E Purchaser Ferris Basin Pipeline CompanyCasing 7" Wt. 23.0 I.D. 6.366 Set at 3747' Perf. 3317' To 3160'Tubing 3 1/2" Wt. 6.5 I.D. 2.447 Set at 3310' Perf. 3517' To 3517'Gas Pay: From 3317' To 3517' L 3507' xG 0.665 -GL 2332' Bar.Press. 13.2Producing Thru: Casing 7 Tubing 7 Type Well Single CompletionDate of Completion: 7-12-57 Packer Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 72-1/4CO₂ 0.45%H₂ 1.3%

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Prover</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						978.2				72-1/4 Fr. 3.
1.	4"	1.50"	467.3	6.8	102	884.8				24 Hrs.
2.	4"	1.50"	467.3	14.3	83	830.5				24 Hrs.
3.	4"	1.50"	475.6	25.9	70	746.7				24 Hrs.
4.	4"	1.50"	451.0	42.0	61	670.3				24 Hrs.
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	15.26	53.27		0.9618	0.9498	1.033	7.3
2.	15.26	32.9		0.9726	0.9498	1.033	12.3
3.	15.26	12.5		0.9805	0.9498	1.043	16.5
4.	15.26	41.0		0.9962	0.9498	1.046	21.0
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.Gravity of Liquid Hydrocarbons deg.F_c 5.266 (1-e^{-s}) 0.14Specific Gravity Separator Gas deg.Specific Gravity Flowing Fluid deg.P_c 992.4 P_c² 984.8

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	884.8	782.8	4.322	21.36	2.161	782.8	475.3	782.8	.1
2.	746.7	557.1	7.168	51.38	7.624	716.4	265.5	746.2	.5
3.	746.7	557.1	8.824	77.86	14.46	646.7	377.7	770.2	.78
4.	670.3	449.3	12.49	156.0	33.39	490.3	494.6	710.2	.73
5.									

Absolute Potential: 3960 MCFPD; n 0.90COMPANY D. B. Monahan, Jr.ADDRESS Box 17, Big Springs, TexasAGENT and TITLE W. J. BarrettWITNESSED /s/ W. J. BarrettCOMPANY Ferris Basin Pipeline Company

REMARKS

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia

P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .